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Journal of Materials in Civil Engineering
Vol. 7, Issue.1, 1995

Abstract: The repair performance of resinous and cementitious materials exposed to static and fluctuating temperature conditions has been evaluated in this study, which is of importance for the repair of concrete structures in the Arabian Gulf region. Specimens were exposed to a total of 90 thermal cycles between 25 °C and 70 °C, simulating the temperature variation of concrete surfaces on typical summer days in the Arabian Gulf region. The slant shear bond strengths as well as failure characteristics have been observed at 0, 60, and 90 cycles. The results show that the shear slant bond strength undergoes significant reduction with thermal fluctuations due to the thermal incompatibility between the concrete and the repair materials. It is found that for resinous materials the reduction varied from 9.3-20.47% for 60 cycles, and from 18.98-36.43% for 90 thermal cycles. For the cementitious materials, the corresponding values were 3.2-17.46% for 60 cycles, and 8.07-34.80% for 90 cycles. It is also seen, in general, that the mode of failure of the test specimens changed from crushing of concrete to combined crushing-joint failure at 60 cycles, and then to a distinct joint failure at 90 thermal cycles.